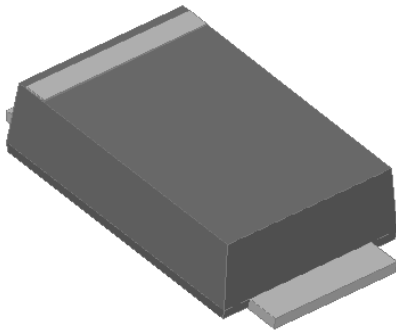


Surface Mount General Purpose Rectifier

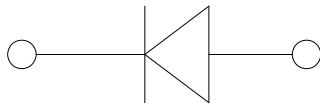


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, automotive and telecommunication.



Mechanical Data

- **Package:** SMAF
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AFQ	G1BFQ	G1DFQ	G1GFQ	G1JFQ	G1KFQ	G1MFQ
Device marking code			G1AF	G1BF	G1DF	G1GF	G1JF	G1KF	G1MF
Repetitive peak reverse voltage	V _{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS voltage	V _{RMS}	V	35	70	140	280	420	560	700
Average rectified output current @60Hz sine wave, Resistance load	I _O	A	1.0						
Surge(non-repetitive)forward current @ 60Hz half-sine wave, 1 cycle, T _J =25°C	I _{FSM}	A	40						
Current Squared Time @1ms≤t<8.3ms T _J =25°C	I ² t	A ² s	6.64						
Storage temperature	T _{STG}	°C	-55 ~+175					-55 ~+150	
Junction temperature	T _J	°C	-55 ~+175					-55 ~+150	

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	G1AFQ	G1BFQ	G1DFQ	G1GFQ	G1JFQ	G1KFQ	G1MFQ	
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.0A	1.1							
Typical junction capacitance	C _J	pF	V _R =4V, 1 MHz	16						12	
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM}	μA	Ta=25°C	5							
			Ta=125°C	50							



G1AFQ THRU G1MFQ

■ Characteristics(Typical)

Fig.1:Forward Current Derating Curve

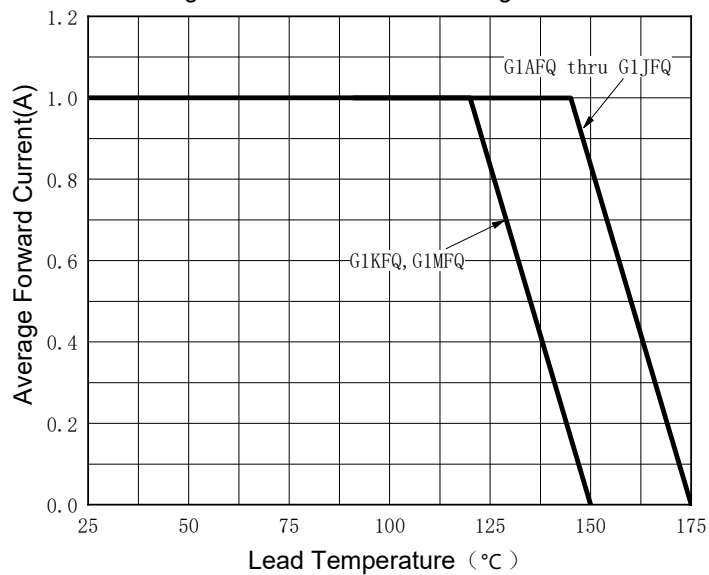


Fig.2: Surge Forward Current Capability

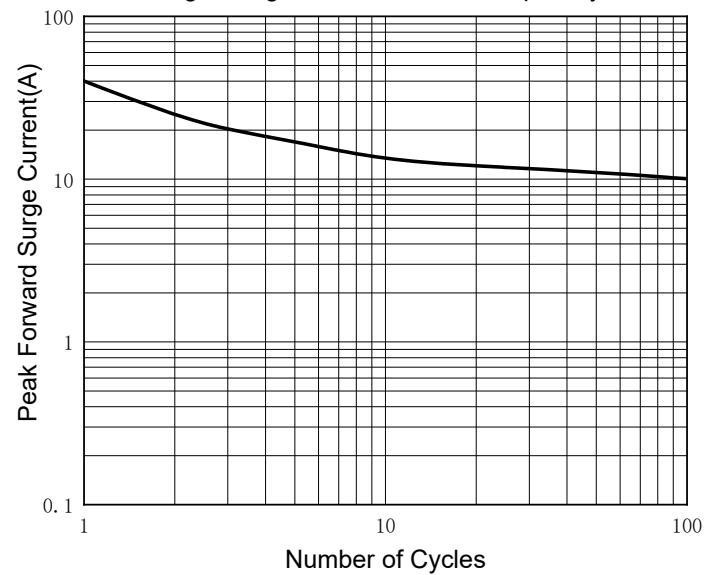


Fig.3-Typical Forward Characteristics

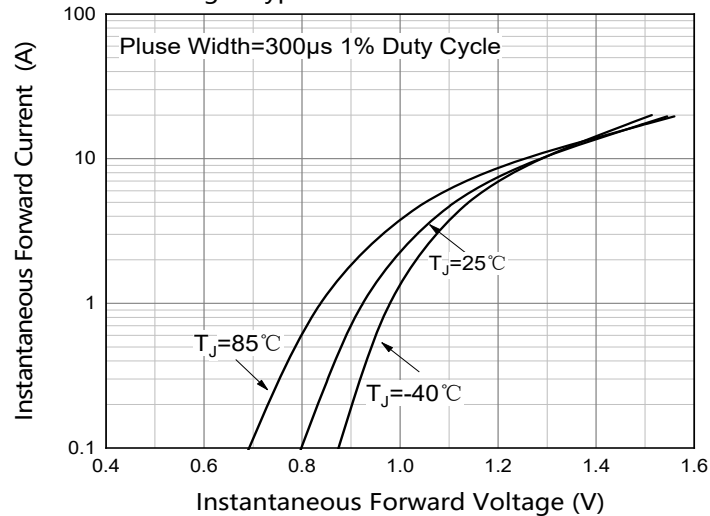
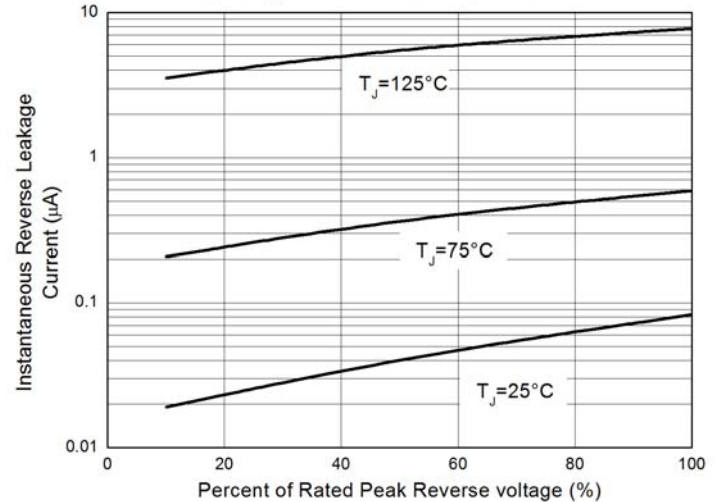


Fig.4 - Typical Reverse Leakage Characteristics



■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	G1AFQ	G1BFQ	G1DFQ	G1GFQ	G1JFQ	G1KFQ	G1MFQ
Thermal resistance	$R_{\theta J-A}$	°C/W	65 ⁽¹⁾						
	$R_{\theta J-L}$		20 ⁽¹⁾						

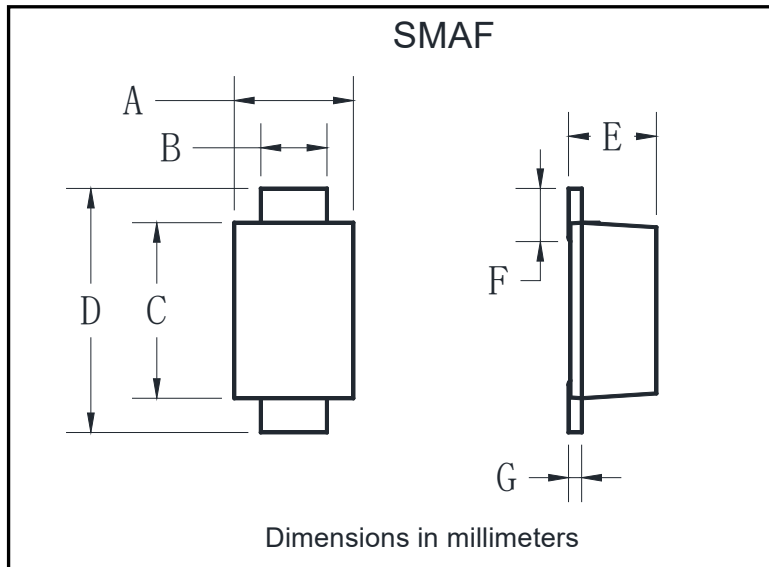
Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 5 mm x 5 mm copper pad areas.



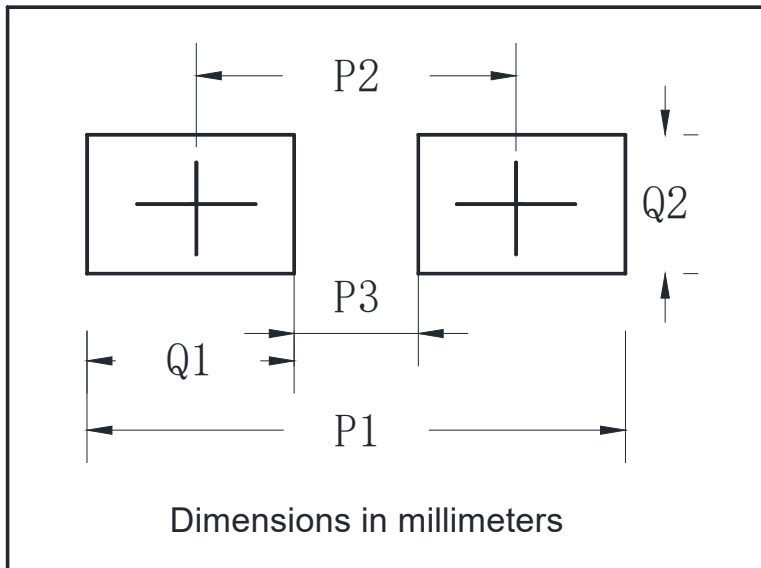
G1AFQ THRU G1MFQ

■ Outline Dimensions



SMAF		
Dim	Min	Max
A	2.40	2.80
B	1.35	1.45
C	3.40	3.60
D	4.40	4.80
E	1.05	1.25
F	0.50	1.00
G	0.15	0.31

■ Suggested pad layout



SMAF	
Dim	Millimeters
P1	6.50
P2	4.00
P3	1.50
Q1	2.50
Q2	1.70

■ Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
G1AFQ~G1MFQ	F1	Approximate 0.034	3000	96000	7" reel



G1AFQ THRU G1MFQ

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXXX is marking code, like G1MFQ marking code is G1MF.
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 17th week of 2022, date code is 217
The 17th week of 2023, date code is 317



G1AFQ THRU G1MFQ

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, lifesaving, lifesustaining, or military. Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.